

Engineering Heritage Australia Bulletin: #5

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Disappearing Gun

As part of new walking track between Middle Head – Gubbuh Gubbuh, and Georges Head in Sydney Harbour National Park, the NSW National Parks & Wildlife Service is developing new physical and digital interpretation to enable visitors to learn more about the area's history – particularly the state-significant military fortifications. This includes digital animations depicting some of the powerful defences of Sydney Harbour.

Robert Newton, Principal Project Officer of the Major Infrastructure Delivery Unit, advises that the first animation depicts the 'disappearing guns' installed in 1889 at Inner Middle Head. The first fortifications at this location were constructed in 1871 to hold five 80-pounder rifled muzzle loading guns. In 1889 though, these were replaced with two more advanced breech-loading 6-inch guns on 'disappearing' carriages. A technological marvel for its day, the gun would recoil into a pit to be reloaded as hydraulic rams powered the gun back into the first position. The gun emplacements were connected to a subterranean magazine via stone trenches and underground tunnels.

To create these animations they are utilising data from a full 3-D site scan, reference to original plans and drawings, and feedback from former RAA gunners to ensure historical accuracy.

The Middle Head 'disappearing' guns last fired and then disappeared forever, over 100 years ago, but have been brought back to life via this new one-minute digital animation, which you can watch on the project webpage.

<https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-management/community-engagement/walking-tracks-and-trails-in-national-parks/sydney-harbour-scenic-walk>

The Ewing Stadialtimeter – again

Apropos the piece about The Ewing Stadialtimeter, Doug Boleyn shared Bulletin #4 with his friend Chris Hutchison, and received the following reply:

Thanks, Doug, for sending on your attachments, including EHA Bulletin 4 with the article on the Ewing Stadialtimeter. I found all the attachments interesting and the Stadialtimeter article brought back almost forgotten memories of using one while working for the Hunter District Water Board in 1968 and 1969.

It was a great tool that improved the rate of coverage and reduction of levels and distances in the large number of tacheometric surveys completed by the survey staff in that organisation. It was a great help, indeed, and improved productivity considerably.

It was eventually superseded by total stations when they became available during the 1980's. In the meantime, after my return from Antarctica and establishment of my surveying consultancy, I used the Wild RDS self-reducing tachometer, particularly on route survey and profiling for design of HT power lines on contract to both the Electricity Commission and Shortland County Council. This was also a great instrument. A great help to increase productivity with wonderful optics and much lighter to carry in rough country than the early Electronic Distance Measuring (EDM) equipment. Total stations superseded the RDS as well.

NSW Department of Main Roads' image and film library

The image and film library from the [TfNSW Historical Archive](#) is available online – it records almost a century's work from the start of the Department of Main Roads.

This alert was provided by Amie Nicholas, Heritage and Conservation Engineer (Structural), with Transport for NSW, and a member of EHA (Sydney).

Contributions needed

Do you have news, information, bright ideas, issues of concern that would interest and be helpful to others – maybe even advice about online talks? If you do, would you be willing to share, by sending them to Michael at m.clarke32@optusnet.com.au for inclusion in the next Bulletin; we have had many appreciative responses to earlier editions, but we would like more Australia-wide content.

Bill Phippen
Acting Chair, Engineering Heritage Sydney